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## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Complete if Known						
Application Number	10/747,737					
Filing Date	12/29/2003					
First Named Inventor	Bailey et al.					
Group Art Unit	Unassigned					
Examiner Name	Unassigned					
Attorney Docket Number	PA97/UTS-43-09D13D21					

			-	U.S. PATENT DOCUMEN	TS	
Examiner Initials*	Cite No.	U.S. Patent C	Nocument Kind Code <sup>2</sup> (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM- DD-YYYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
ec	A1	4,326,805		Feldman et al.	04/27/1982	
$\neg \tau$	A2	4,724,222		Feldman et al.	02/09/1988	
	A3	5,804,474		Sakaki et al.	09/08/1998	
	A4	5,884,292		Baker et al.	03/16/1999	
	A5	6,361,831		Sato et al.	03/26/2002	·
L	A6	6,423,207		Heidari et al.	07/23/2002	
EL	A7	6,517,977		Resnick et al.	02/11/2003	
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<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered Include copy of this form with next communication to applicant.

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<sup>&</sup>lt;sup>1</sup>Unique citation designation number. <sup>2</sup>See attached Kinds of U.S. Patent Documents. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>9</sup>Applicant is to place a check mark here if English language Translation is attached.

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Substitute f	for form 1449A/P	то		Complete if Known		
				Application Number	10/747,737	
INFO	<b>RMATION</b>	DISCL	OSURE	Filing Date	12/29/2003	
STAT	EMENT B	Y APPI	LICANT	First Named Inventor	Bailey et al.	
				Group Art Unit	Unassigned	
(use as many sheets as necessary)				Examiner Name	Unassigned	
Sheet	2	of	4	Attorney Docket Number	PA97/UTS-43-09D13D21	

Examiner Initials*	Cite No.1	Office <sup>3</sup>	Foreign Patent Docu	Kind	Code <sup>®</sup>	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	1
EC	A8	wo	01/63361	I		Heidari et al.	08/30/2001	riguies Appear	╁
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	A11	wo	01/79592			Hallberg et al.	10/25/2001		十
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<sup>&</sup>lt;sup>1</sup>Unique citation designation number. <sup>2</sup>See attached Kinds of U.S. Patent Documents. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached.

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Substitute for form 1449B/PTO				Complete if Known		
				Application Number	10/747,737	
INFO	<b>RMATIO</b>	N DISCI	OSURE	Filing Date	12/29/2003	
STATEMENT BY APPLICANT				First Named Inventor	Bailey et al.	
				Group Art Unit	Unassigned	
(use as many sheets as necessary)			essary)	Examiner Name	Unassigned	
Sheet	3	of	4	Attorney Docket Number	PA97/UTS-43-09D13D21	

OTHER PRIOR	R ART - I	NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
EL	A14	Krauss, et al.; "Fabrication of Nanodevices Using Sub-25nm Imprint Lithography", Appl. Phys. Lett., 67(21), 3114-3116, 1995.	
EL	A15	Feldman et al., "Wafer Chuck for Magnification Correction in X-Ray Lithography", Journal of Vacuum Science and Technology, Nov/Dec 1998, pp. 3476-3479, vol B 16(6)	
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EC	A17	CHOI et al., "Method and System of Automatic Fluid Dispensing for Imprint Lithography Processes," U.S. Patent Application 09/908,455. Filed with USPTO on July 17, 2001.	
EC	A18	CHOI et al., "Methods for High-Precision Gap and Orientation Sensing Between a Transparent Template and Substrate for Imprint Lithography," U.S. Patent Application 09/920,341. Filed with USPTO on August 1, 2001.	
EC	A19	CHOI et al., "Flexture Based Macro Motion Translation Stage," U.S. Patent Application 09/934,248. Filed with USPTO on August 21, 2001.	
Ec	A20	BAILEY et al., "Template for Room Temperature Low Pressure Micro- and Nano-Imprint Lithography," U.S. Patent Application 09/976,681. Filed with USPTO on October 12, 2001.	
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R	A22	WATTS et al., "System and Method for Dispensing Liquids," U.S. Patent Application 10/191,749. Filed with USPTO July 9, 2002.	
EC	A23	SREENIVASAN et al., "Method and System for Imprint Lithography Using an Electric Field," U.S. Patent Application 10/194,410. Filed with USPTO July 11, 2002.	
EL	A24	SREENIVASAN et al., "Step and Repeat Imprint Lithography Systems," U.S. Patent Application 10/194,414. Filed with USPTO July 11, 2002.	

Examiner Signature	8	Date Considered	5/15	106
Signature	Vu/C	Considered	7171	

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. Complete if Known Substitute for form 1449B/PTO **Application Number** 10/747,737 INFORMATION DISCLOSURE 12/29/2003 **Filing Date** STATEMENT BY APPLICANT **First Named Inventor** Bailey et al. Group Art Unit Unassigned (use as many sheets as necessary) **Examiner Name** Unassigned 4 **Sheet** of Attorney Docket Number PA97/UTS-43-09D13D21

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS							
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>				
11		SREENIVASAN et al., "Step and Repeat Imprint Lithography Processes," U.S. Patent Application					
0	A25	10/194,991. Filed with USPTO July 11, 2002.	İ				
[/		WILLSON, et al., "Compositions For Dark-Field Polymerization And Method Of Using The Same For Imprint					
$\omega$	A26	Lithography Processes," U.S. Patent Application 10/318,273. Filed with USPTO December 12, 2002.					
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<sup>&</sup>lt;sup>1</sup>Unique citation designation number. <sup>2</sup>Applicant is to place a check mark here if English language Translation is attached.

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Under the Paperwork Reduction Act of 1995, no pursons are required to respond to a collection of information unless it displays a valid OMB control number. Substitute for form 1449A/PTO Complete if Known **Application Number** 10/747,737 **INFORMATION DISCLOSURE** Filing Date 12/29/2003 STATEMENT BY APPLICANT First Named Inventor Todd Balley

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Group Art Unit

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**Sheet** 

 Examiner Name	Unassigned
Attorney Docket Number	PA97-39D13D21

				U.S. PATENT DOCUMEN	TS	•
Practices Initials	City No.	U.S. Palent Document Rind Code* Number (Finner)		Name of Propries or Applicant of Clad Document	Date of Publication of Cited Document MM-DD-YYYYY	Pages, Coturns, Lines, Where Relevant Passages or Relevant Figure Appear
ec	B1	2004/0168588	A1	Choi et al.	9/2/2004	Lagurita inspirati
$ \Gamma$	<b>B2</b>	2004/0149687	A1	Choi et al.	8/5/2004	
$T^{-1}$	B3	2003/0215577	A1	Willson et al.	11/20/2003	
	B4	2004/0007799	Af	Choi et al.	1/15/2004	
	B5	2004/0021254	A1	Sreenivasan et al.	2/5/2004	
	86	2004/0021866	A1	Watts et al.	1/5/2004	<del></del>
	87	2004/0163563	A1	Balley et al.	8/26/2004	
	B8	2004/0251775	A1	Choi et al.	12/16/2004	
	68	2004/0022888	A1	Sreenivasan et al. Sreenivasan et al.	2/5/2004 3/18/2004	
	B10	2004/0053146	A1			<del></del>
	B11 2004/0086793 A1 B12 2004/0104641 A1 B13 2004/0168588 A1		A1		5/6/2004 6/3/2004	· · · · · · · · · · · · · · · · · · ·
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	B14	2004/0169441	A1	Choi et al.	9/2/2004	
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	B16	2004/0189994	A1	Sreenivasan et al.	9/30/2004	
	B17	2004/0189996	A1	Sreenivasan et al.	9/30/2004	
	B18	2004/0200411	A1	Willson et al.	10/14/2004	
	B18	2004/0209177	A1	Sreenivasan et al.	10/21/2004	
	820	6,842,229	B2	Sreenivasan et al	1/11/2005	`
	B21	2004/0089979	A1	Rubin	5/13/2004	
	822	2004/0090611	A1	Choi et al.	5/13/2004	
	B23	2004/0112861	A1	Choi et al.	6/17/2004	
	B24	2004/0223131	A1	Choi et al.	11/11/2004	
3	825	4,256,829		Daniel	3/17/1981	· · · · · · · · · · · · · · · · · · ·
el	B26	2003/0179354	A1	Araki et al.	9/25/2003	

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Substitute fo	r form 1449A/F	ग०		Complete if Known			
				Application Number	10/747,737		
INFOR	MATION	DISC	<b>OSURE</b>	Filing Date	12/29/2003		
STATE	EMENT E	BY APP	LICANT	First Named Inventor	Todd Bailey		
				Group Art Unit	1756		
(US	e as many she	ets as nece	ssary)	Examiner Name	Unassigned		
Sheet	2	of	3	Attorney Docket Number	PA97-39D13D21		

BL	Case Np.1 B27 626	U.S. Peterd Do Number 2003/0092261 5,737,064	Symptotic Code ( J. Incomm)	Name of Palenten or Applicant of Cited Document  Kondo et al.  Inous et al.	Date of Publication of Cited Document MM-0D-YYYY 5/15/2003 4/7/1998	Pages, Columns, Lines, Where Relevant Passages or Retevant Figures Appear
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**Attorney Docket Number** 

OTHER PRIOR	R ART -	NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T
El	6.29	U.S. App. No. 10/614716, filed 7/7/2003, entitled: Conforming Template for Patterning Liquids Disposed on Substrates, naming inventors Sreenivasan et al.	
EL	B30	U.S. App. No. 10/785248, filed 2/24/2004, entitled: Method to Control the Relative Position Between a Body and a Substrate, naming inventors Scientivasan et al.	
EL	B31	U.S. App. No. 10/864214, filed 6/9/2004, entitled: Imprint Lithography System to Produce a Light to Impinge upon and Polymerize a Liquid in Superimposition with Template Overlay Marks, naming inventors Sreenivasan et al.	
El	825	U.S. App. No. 10/923629, filed 8/20/2004, entitled: Apparalus for Imprint Lithography Using an Electric Field, naming inventors Sceenivasan et al.	
d	B33	U.S. App. No. 10/978285, filed 10/29/2004, entitled: Step and Flash Imprint Lithography, naming inventors Willson et al.	
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<sup>&</sup>lt;sup>1</sup>Unique citation designation number. <sup>2</sup>Applicant is to place a check mark hore if English language Translation is attached.

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TRADES Substitute for form 1449A/PTO Complete if Known APPLICATION NUMBER 10/747,737 INFORMATION DISCLOSURE FILING DATE 12/29/2003 STATEMENT BY APPLICANT FIRST NAMED INVENTOR Bailey et al. Group Art Unit 1756 (use as many sheets as necessary) Examiner Name Unassigned PA97-39D13D21 Sheet of Attorney Docket Number

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EL	C1	4,731,155		Napoli et al.	3/15/1988	
	C2	5,425,848		Haisma et al.	6/20/1995	
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Ø)	C17	2002/0132482	A1	Chou	9/19/2002	
EL	C18	2002/0167117	A1	Chou	11/14/2002	

Examiner Signature Date Considered 5/15/06
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Substitute fo	r form 1449A/I	ТО		Complete if Known				
INE	ORMATIO	ו חופרו	OCUDE	APPLICATION NUMBER	10/747,737			
	ATEMENT I			FILING DATE	12/29/2003			
317	VI CIVICIAI I	DI AFF	LICAN	FIRST NAMED INVENTOR	R Bailey et al.			
				Group Art Unit	1756			
(u	se as many shee	ts as necess	ary)	Examiner Name	Unassigned			
Sheet	2	of	7	Attorney Docket Number	PA97-39D13D21			

					FOREIGN	PATENT DOCU	MENTS				
Examiner Initials*	Cite No.1	Foreign Patent D Office Number <sup>4</sup>			nent Kind Code <sup>s</sup> (if known)	Kind Code Name of Patentee or Applicant or		ant of Date of Publication of Cited Document MM-DD-YYYY		Pages, Coturns, Lines, Where Relevant Passages or Relevant Figures Appear	
EC	C19	6,482,742	: .	81	Chou		11/19/20	02			
	C20	2003/0080	0471	A1	Chou		5/1/2003				
	C21	2004/0036	5201	A1	Chou	et al.	2/26/200	4			

}	C20	2003/0080471	A1	Chou	5/1/2003	
	C21	2004/0036201	A1	Chou et al.	2/26/2004	
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	C24	6,809,356	B2	Chou	10/26/2004	
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	C28	2004/0197843	A1	Chou et al.	10/7/2004	
	C29	2004/0156108	A1	Chou et al.	8/12/2004	
	C30	2004/0137734	A1	Chou et al.	7/15/2004	
	C31	2004/0131718	A1	Chou et al.	7/8/2004	
	C32	2004/0118809	A1	Chou et al.	6/24/2004	
	C33	2004/0046288	A1	Chou	3/11/2004	
	C34	2003/0080472	A1	Chou	5/1/2003	
<b>b</b>	C35	2003/0034329	A1	Chou	2/20/2003	
EL	C36	2002/0042027	A1	Chou et al.	4/11/2002	

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INE	ORMATIO	N DISCL	COLIDE	APPLICATION NUMBER	10/747,737			
	ATEMENT			FILING DATE	12/29/2003			
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				Group Art Unit	1756			
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Sheet	3	of	7	Attorney Docket Number	PA97-39D13D21			

					PATENT DOCU	MENTS				
Examiner Initials*	Cite No.1	ł .	Foreign Patent Document  Kind Code <sup>3</sup> (if known)  Name of Patentee or Applicant of Cited Document  MM-DD-YYYY		Kind Code Name of Patentee or A		Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	Т	
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EL	C37	6,580,172	B2	Mano	ini et al.	6/17/200	3			_
	C38	6,220,561	B1	Garci	ia	4/24/200	1			_
ŀ	C39	11/047,428	<u> </u>	Babb	s et al.	1/31/200	5			
	C40	4,512,848		Deck	man et al.	4/23/198	5			
	C41	6,517,995	B1	Jacol	oenson et al.	2/11/200	3			
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À	C45	5,849,209		Kindt	-Larsen et al.	12/15/19	98			
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	ATEMENT I			FILING DATE	12/29/2003		
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,				Group Art Unit	1756		
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Sheet	4	of	7	Attorney Docket Number	PA97-39D13D21		

				FOREIGN	PATENT DOCUMENTS			
Examiner initials*	Cite No. <sup>1</sup>	Office 3	Foreign Patent Docume Number	nt Kind Code <sup>8</sup> (# known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T⁰
	1		<del></del>		<del>.</del>	T		_
Ele	C47	wo	00/21689		Chou et al.	4/20/2000		
	C48	JP	02-92603		Kurikawa et al.	4/3/1990		
	C49	JP	02-24848		Kamio	1/26/1990		
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	C51	wo	02/07199		Chou	1/24/2002		
	C52	wo	2004/114016		Chou et al.	12/29/2004		
	C53	wo	99/05724		Chou et al.	2/4/1999		
	C54	wo	03/010289		Chou et al.	2/6/2003		
	C55	wo	03/079416		Chou	9/25/2003		
EC	C56	wo	03/099536		Chou et al.	12/4/2003		
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	Examiner Signature	Ind	Date Conside	ered 5/15/06
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Substitute for form 1449A/PTO				Complete if Known		
INFO	RMATION	DISCLO	SURE	APPLICATION NUMBER	10/747,737	
STA	TEMENT B	Y APPLI	ICANT	FILING DATE	12/29/2003	
				FIRST NAMED INVENTOR	Bailey et al.	
(USE	e as many sheets	as necessary	V)	Group Art Unit	1756	
Sheet	5	of	7	Examiner Name	Unassigned	
	<u> </u>			Attorney Docket Number	PA97-39D13D21	

0:40	Include name of the author (in CAPITALLETTERS), title of the article (when appropriate), title of the	T -
		T
140.	publisher, city and/or country where published.	
	Chou, Nanoimprint Lithography and Lithographically Induced Self-Assembly, MRS Bulletin, pp.	7
	Cite No.	No. item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.

EL	C57	512 - 517, 7/1/2001
	C58	Choi et al., Design of Orientation Stages for Step and Flash Imprint Lithography, Precision Engineering, pp. 192 - 199, 1/1/2001
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	C60	Chou et al., Imprint Lithography with 25-Nanometer Resolution, Science Vol. 272, pp. 85 - 87, 4/5/1996
	C61	Chou et al., Imprint Lithography with Sub-10 nm Feature Size and High Throughput, Microelectronic Engineering 35, pp. 237 - 240, 1/1/1997
	C62	Halsma et al., Mold-assisted Nanolithography: A Process for Reliable Pattern Replication, J. Vac. Sci. Technol. B, pp 4124 - 4128, 11/1/1996
	C63	Chou et al., Imprint of Sub-25 nm Vias and Trenches in Polymers, Appl. Phys. Lett. 67 (21), 11/20/1995
	C64	Johnson et al., Advances in Step and Flash Imprint Lithography, SPIE Microlithography Conference, 2/23/2003
EL	C85	Chou et al., Lithographically induced Self-assembly of Periodic Polymer Micropillar Arrays, J. Vac. Sci. Technol. B 17 (6), pp. 3197 - 3202, 11/1/1999

Examiner Signature	med	Date Considered	5/15/06
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Substitute for form 1449A/PTO				Complete if Known		
INFO	RMATION	DISCLO	SURE	APPLICATION NUMBER	10/747,737	
STAT	<b>FEMENT B</b>	Y APPL	ICANT	FILING DATE	12/29/2003	
,				FIRST NAMED INVENTOR	Bailey et al.	
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Sheet	6	of	7	Examiner Name	Unassigned	
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OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²	

EC	C86	Colburn et al., Step and Flash Imprint Lithography: A New Approach to High-Resolution Patterning, Proc. Of SPIE, vol. 3676, 3/1/1999			
	C67	Heidari, Nanoimprint Lithography at the 6 in. Wafer Scale, J. Vac. Sci. Technol. B 18(6), pp. 3557 - 3560, 11/1/2000			
	C68	Translation of Japanese Patent 02-92603			
	C69	Translation of Japanese Patent 02-24848			
	C70	Chou et al., Ultrafast and Direct Imprint of Nanostructures in Silicon, Nature, Col. 417, (June 2002), pp. 835-837, 6/1/2002			
	C71	Chou et al., Nanoimprint Lithography, Journal of Vacuum Science Technolgoy B 14(16), pp. 4129-4133, 11/1/1996			
	C72	Colburn et al., Development and Advantages of Step-and-Flash Lithography, Solid State Technology, 7/1/2001			
	C73	Colburn et al., Characterization and Modeling of Volumetric and Mechanical Properties for Step and Flash Imprint Lithography Photopolymers, Journal of Vacuum Science Technology. Vol b. 19(6), 11/1/2001			
EL	C74	Bailey et al., Step and Flash Imprint Lithography: Defect Analysis, Journal of Vacuum Science, B 19(6), pp. 2806-2810, 11/1/2001			

Examiner Signature	bel	Date Considered	5/15/06

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				APPLICATION NUMBER	10/747,737	
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(use as many sheets as necessary)			<i>(</i> )	Group Art Unit	1756	
Sheet	7	of	7	Examiner Name	Unassigned	
				Attorney Docket Number	PA97-39D13D21	

OTHER PRIOR	R ART -	NON PATENT LITERATURE DOCUMENTS					
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EC	C75	Bailey et al., Step and Flash Imprint Lithography: Template Surface Treatment and Defect Analysis, Journal of Vacuum Science, B 18(6), pp. 3572-3577, 11/1/2000					
EC	C76	Schneider et al., Stripes of Partially Fluorinated Alkyl Chains: Dipolar Langmuir Monolayers					
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